UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,162	06/29/2000	THOMAS B. HALL	102850-11	7115

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HARRISON, CHANTE E

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 04/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No.	Applicant(s)
	09/607,162	HALL ET AL.
	Examiner	Art Unit
	Chante Harrison	2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>23 February 2003</u> .

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6* . 6)☐ Other: .

DETAILED ACTION

1.   This action is responsive to communications: Request for Reconsideration, filed

on 2/23/03.

This action is made FINAL.

2.   Claims 1-20 are pending in the case. Claims 1, 7, 11, 14 and 17 are

independent claims.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (e) the invention was described in a patent granted on an application for patent
> by another filed in the United States before the invention thereof by the applicant
> for patent, or on an international application by another who has fulfilled the
> requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before
> the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1.   Claims 1-4, 6, 11 and 12 are rejected under 35 U.S.C. 102(e) as being

anticipated by Cave, U.S. Patent 5,841,438, 11/1998.

As per independent claim 1, Cave discloses separating data into graphical and

multimedia data (Fig. 2A), providing three sequencing schemes within the multimedia

data (Fig. 2A) by providing a first scheme is a hierarchical structure of bounding boxes

to synchronize displayed graphical data with time ordered events (Fig. 2A), a sequence

map containing tracks, each track being a path through the bounding boxes (Fig. 2A), a

third scheme comprising a time map defining the time ordered events (Fig. 2A).

As per dependent claim 2, Cave discloses the graphical data are a musical

notation and the time ordered events correspond to a musical performance (Fig. 2A

"205"; col. 6, ll. 22-26).

As per dependent claim 3, Cave discloses the bounding boxes is defined for a

musical score (col. 6, ll. 16-21; abstract).

As per dependent claim 4, Cave discloses a plurality of time maps corresponding

to a plurality of musical performances (Fig. 2A).

As per dependant claim 6, Cave discloses a single bit for each track in the

sequence map (col. 7, ll. 20-30), each bit indicating whether a bounding box is

associated with a time event (col. 7, ll. 45-55).

As per independent claim 11, Cave discloses using the bounding boxes to

position and zoom the displayed interactive graphics in response to user input (col. 8, ll.

37-46). Claim 11 claims a method performed in the computer of claim 1. The rationale

as applied in the rejection of claim 1 applies herein.

As per dependent claim 12, Cave discloses using the bounding boxes to highlight

the displayed graphics (col. 9, ll. 1-10).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

2.   Claims 5, 7-10, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Cave as applied to claim 1 and further in view of Stephen Kennedy, U.S. Patent

5,690,496, 11/1997.

As per dependent claim 5, Cave fails to specifically disclose the three

sequencing schemes is done on the server, which Kennedy discloses (col. 3, II. 60-

61col. 4, II. 5-22). It would have been obvious to one of ordinary skill in the art to

combine the server disclosed by Kennedy with the disclosure of Cave because Cave

teaches storing files on multiple devices for delivery and storing files on a hard drive

enables shared access over a network.

As per independent claim 7, Cave discloses graphical data logically separate

from multimedia data (Fig. 2A), multimedia data comprising a plurality of data subsets

(Fig. 2A), a plurality of bounding boxes (Fig. 2A), a sequence map containing tracks,

each track corresponding to a sequence of the bounding boxes (Fig. 2A), and a time

map synchronizing audio or video (Fig. 2A). Cave discloses storing data (col. 6, II. 1-

15), but fails to disclose a server, which Kennedy discloses (col. 3, II. 60-61; col. 4,II. 5-

22). It would have been obvious to one of ordinary skill in the art to include the server

disclosed by Kennedy with the disclosure of Cave because Cave teaches storing files

on multiple devices for delivery and storing files on a hard drive enables shared access

over a network.

As per dependent claim 8, Cave discloses a display (Fig. 1), as does Kennedy

(Fig. 7).

As per dependent claim 9, Cave discloses tagging a bounding box with information that can be added or removed and displayed upon user request (col. 6, ll. 29-37), as does Kennedy (col. 7, ll. 20-23, 55-61).

As per dependent claim 10, Cave discloses the bounding boxes defining location of the graphical data on the display (col. 6, ll. 15-21), as does Kennedy (col. 4, ll. 40-45).

As per dependent claim 13, Cave fails to disclose highlighting the graphics in sync to an external performance, which is disclosed by Kennedy (col. 6, ll. 5-25). It would have been obvious to combine the highlighting of graphics in sync to an external performance with the disclosure of Cave because Cave teaches highlighting the score during playback and highlighting helps the score to playback in a timely manner.

As per independent claim 14, Cave discloses the discloses graphical and multimedia data corresponding to interactive graphics (col. 6, ll. 5-15; Fig. 2A), bounding boxes with the multimedia data (Fig. 2A), using the bounding boxes to position and zoom the displayed interactive graphics and highlighting the graphics in response to user input (col. 8, ll. 30-46; col. 9, ll. 1-10), but fails to disclose highlighting the graphics in sync to an external performance and a server. Kennedy discloses highlighting the graphics in sync to an external performance (col. 6, ll. 5-25) and a server (col. 3, ll. 60-61; col. 4, ll. 5-22). It would have been obvious to include the highlighting of graphics in sync to an external performance with the disclosure of Cave because Cave teaches

highlighting the score during playback and highlighting helps the score to playback in a

timely manner; and to include a server with the disclosure of Cave because Cave

teaches storing files on multiple devices for delivery and storing files on a hard drive

enables shared access over a network.

As per dependent claim 15, Cave fails to disclose a network for downloading the

interactive graphics, which is disclosed by Kennedy (col. 3, ll. 60-61; Figs. 1 & 2). It

would have been obvious to one of ordinary skill in the art to include a network for

downloading the interactive graphics in the disclosure of Cave because he teaches

preparing files to deliver multimedia objects and delivery enables the sharing of data

between computers.

As per dependent claim 16, Cave discloses the interactive graphics is sheet

music (abstract), as does Kennedy (Fig. 7). Cave fails to disclose the external

performance is a musical performance, which Kennedy does disclose (col. 6, ll. 5-25). It

would have been obvious to one skilled in the art at the time of invention to combine

Kennedy's disclosure of an external musical performance with that of Cave so that

playback would be interactive.

3.   Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cave and further in view of Marlin Eller, U.S. Patent 5,889,860, 3/1999.

As per independent claim 17, Cave discloses storing graphical data (col. 6, ll. 1-15; Fig. 2A), bounding boxes controlling display of the graphical data (col. 8, ll. 15-25), contiguity and hierarchy of the bounding boxes to eliminate repetitive encoding of the bounding boxes (Fig. 2D), thereby reducing the number of bytes used to represent the graphical data and providing the compressed graphical data (col. 8, ll. 15-30). Cave fails to disclose a server, which Eller discloses (Fig. 1). It would have been obvious to one of ordinary skill in the art to include the server disclosed by Eller with the disclosure of Cave because Cave teaches storing files on multiple devices for delivery and storing files on a hard drive enables shared access over a network.

As per independent claim 18, discloses defining the position of a subsequent bounding box on the display in terms of an offset from a previous bounding box (col. 7, ll. 28-40), which Eller fails to disclose. However, it would have been obvious to combine the disclosures of Eller and Cave because Eller teaches receiving files for display of data (col. 3, ll. 15-30) and Cave teaches positioning data in the files for subsequent playback.

As per dependent claim 19, Eller discloses transmitting the compressed graphical data via a network (Fig. 9), which Cave fails to specifically disclose. It would have been obvious to include the transmission of compressed data as disclosed by Eller in the disclosure of Cave because Cave teaches compressing the data prior to delivery for playback.

As per dependent claim 20, Cave discloses programming the device to be able to determine hierarchical relationships of all bounding boxes, which Eller fails to specifically disclose (col. 7, ll. 40-55). It would have been obvious to combine the disclosures because Eller teaches decompressing the transmitted data for playback and Cave teaches providing playback capabilities.

Response to Arguments

4.   Applicant's arguments filed 2/23/03 have been fully considered but they are not

persuasive.

Applicant argues (pp. 2, Para 4) Cave does not teach logically separating the

multimedia object into at least two data subsets.

Cave teaches multimedia data comprising sound, music, text, graphics and video

(Fig. 2A).

Applicant argues (pp. 3, Para 1) Cave does not teach providing a second sequencing

scheme comprising a sequence map containing one or more tracks, each track being a

path though the hierarchical structure of bounding boxes and providing a third

sequencing scheme comprising at least one time map defining the series of time

ordered events.

Cave teaches a second sequencing scheme (Fig. 2A) because he discloses

different types of data arranged in multiple tracks executed during a playback score,

which incorporates music (col. 6, ll. 15-37). Cave also discloses each track being a

path through the hierarchical structure because each track is executed during runtime to

demonstrate a multimedia presentation (col. 6, ll. 20-25, 37-45). Additionally, Cave

discloses a third sequencing scheme (Fig. 2A) because he teaches tracks positioned on

a playback grid, where the tracks are played within a given time window (col. 6, ll. 20-27).

Applicant argues (pp. 3, Para 4) Cave does not teach utilizing a hierarchy of bounding boxes to facilitate positioning and zoom of the displayed interactive graphics in response to a user's input.

Cave teaches using the bounding boxes to position the displayed interactive graphics in response to user input because he discloses user manipulation of the bounding box via a drag and drop operation results in the repositioning of bounding boxes such that they fit within a pipe (col. 8, ll. 37-43), which corresponds to a user defined bandwidth that the media should be delivered (col. 8, ll. 15-25). Additionally, Cave teaches user manipulation of the outer lines of a bounding box to change its shape, while maintaining the total area of the bounding box by adjusting the end-of delivery boundary, (which defines the time period in which the media object is executed) so that the data size of the media object represented remains constant (col. 8, ll. 40-58). Thus, by manipulating the boundary lines of the bounding boxes, while maintaining the content of the bounding box, Cave is effectuating a zoom of the object.

Applicant argues (pp. 3, Para 4; pp. 9, Para 1 & 2) Cave does not teach providing a hierarchical set of bounding boxes, as illustrated in Fig. 3 of the present invention in which the hierarchical structure of the bounding boxes delineates the areas of the

graphics where a note or a chord should be positioned in the graphical representation of a musical piece.

Cave teaches a hierarchical set of bounding boxes because he discloses positioning graphics and other multimedia data relative to one another on a display (Figs. 1 & 2A). Additionally, a hierarchical structure of bounding boxes delineating the areas of the graphics where a note or a chord should be positioned in the graphical representation of a musical piece is not claimed.

Applicant argues (pp. 8, Para 1) Eller does not teach logically separating various types of data in a multimedia file and further describing the multimedia data subset having eh hierarchical structure of bounding boxes, in reference to claims 5, 7, 14 and 17.

The previous Office Action did not reject claims 5, 7 and 14 in view of Eller. Thus the argument in reference to those claims is moot. With respect to the rejection of claim 17 in view of Eller, the disclosure of Eller was used to supplement that of Cave because it (Cave) failed to disclose a server storing the graphical data as claimed in claim 17. Thus, Eller discloses a server storing the graphical data because he teaches a computer system including a server, which includes a library or database of digital music scores (col. 4, ll. 25-32).

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Chante Harrison** whose telephone number is **(703)**

305-3937.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Michael Razavi,** can be reached at **(703) 305-4713.**

Any response to this action should be mailed to:

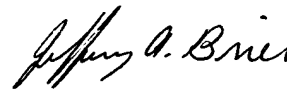Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service

Office whose telephone number is (703) 306-0377.

Ceh
April 28, 2003

JEFFERY BRIER
PRIMARY EXAMINER